

## **Alaska Energy Cost Reduction Program Progress Report**

**Grantee:** Alaska Power Company (a/k/a Alaska Power and Telephone Company)

**Project Name:** Allakaket Power Plant Relocation (Denali)

**Grant # 169-05**

**Period of Report:** Third Quarter 2005 (July 1, 2005 to September 30, 2005)

### **Project activities completed:**

Engineering has selected size and type of all integrated components for the powerhouse.

Equipment Bill of Material for the powerhouse is 80% completed. Evaluation continues on the selection of the prime mover for the generation application and there are ongoing discussions with selected diesel engine manufacturers to determine the best choice for the application considering, efficiency, maintainability and reliability. Special attention is being given to a new engine design being offered by the Caterpillar Company.

Engineering is evaluating alternative methods for powerhouse construction in an effort to reduce the powerhouse area and the associated construction, transportation and installation costs. Included in these studies is consideration for a detached garage/storage area that may be located at the airport in order to more effectively facilitate the activities of operations and maintenance personnel.

Four local heavy equipment operators and one laborer were interviewed and hired, and equipment rented to commence with hauling gravel from the Koyukuk River permitted use area to the new power plant relocation pad. Foundational pad Typar and driveway culvert were purchased and flown to site.

Recently completed site visit, determined the gravel to be of satisfactory quality, the pad location and the plant dimensions were finalized.

### **Project existing or potential problems:**

Construction gravel continues to be a concern. Contact with the Department of Natural Resources (DNR) showed that multiple material sale permits may be issued for the same area. Whoever first mines the gravel has the gravel for their use.

Weather conditions have deteriorated. Freezing rain and snows interferes with materials transporting to Allakaket. Clogged up river ice removed a stock pile of gravel ready for transport into the village.

Poorly maintained rented equipment is prone to breakdowns and in need of constant maintenance.

### **Activities targeted for Next Reporting Period, Fourth Quarter 2005:**

Complete specification and prepare RFQ for the manufacture of the powerhouse modules.

Provide specifications to selected manufacturers, review quotations and award a contract for manufacturing powerhouse modules.

Issue purchase orders for the electrical mechanical equipment to be integrated into the powerhouse modules.

Commence powerhouse module manufacturing.

Continue working to lease a small lot for use as a garage at the airstrip.

Acquire a travel permit through Kanuti National Wildlife Refuge to transport generator modules across their property next spring.